TEXAS AGRICULTURAL EXPERIMENT STATION
A. B. CONNER, Director
College Station, Texas

Bulletin No. 642 October 1943

The Food Supply of Texas Rural Families

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What kinds of foods do rural families of Texas eat? Where do they get them? How satisfactory is the food supply for providing an adequate diet and is it better or poorer than formerly? To answer such questions, information was secured through personal visit in the spring and summer of 1942 to the home of each of 400 rural families distributed among 5 counties in 3 regions of the state — Brazos county, East Central; Nacogdoches and Rusk counties, Northeast; and Lubbock and Lamb counties, Northwest. Three tenure groups, owners or operators, renters, and wage laborers, were included in the survey, with white and negro families in all groups and Mexican also among laborers in one region.

The chief kinds of foods used in the 3 regions were surprisingly similar and appeared to furnish a good diet to three-fourths or more of the families. The great bulk of the food supply was home produced. Owners and renters produced relatively more of their foods than did wage laborers who depended more upon purchase than did the other two groups. All groups obtained some foods, though no great part of the total supply, from other sources, chiefly gift and wild supply.

The only method of food preservation practiced extensively was canning of fruits and vegetables, done by 90% of the families, more by white than negro, and to only a small extent by Mexican.

Trends in the use of foods have been toward a considerably better diet. Whereas Texas school children as found in a dietary survey in 1927-29 did not meet accepted recommendations in the consumption of milk, butter, and eggs, most of these farm families had a generous supply of such foods. Consumption of leafy vegetables and whole grain preparations while still a little too low in many farm families averaged approximately double that found in the previous study. The use of fruits was much the same. Increased fruit consumption is desirable.

More families in the Northwest region had a liberal supply of foods than among those in the East Central and Northeast regions. White owners, renters, and wage laborers, and negro owners did not differ markedly in the proportion of families having excellent food supplies, but fewer negro renters and laborers had satisfactory supplies than in the other groups. Families with children tended to use a greater variety of foods and especially more whole cereals and fruits than did families without children. Apparently the majority of families have achieved, and will be likely to retain the goal of an excellent food supply, largely home produced. But for those who have less satisfactory food supply a garden in fall as well as in spring, increased home food preservation, and better management of good cows and chickens seem in order.

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THE FOOD SUPPLY OF TEXAS RURAL FAMILIES

Jessie Whitacre

A study of the diet of Texas school children in 1927-'29 (5) diclosed that there were no important seasonal or regional differences in food consumption but that in general there appeared to be too little milk, fruits, vegetables, and whole cereals in the diets, and the lack was more pronounced among the children in the farmer, business, and labor groups than in the professional group. Meantime much economic change has occurred affecting farm families as well as other groups. There seemed a need for information on the current situation regarding the sources and kinds of foods available to rural families of Texas and trends in the use of foods. This study was undertaken to supply such information. Three publications, this Bulletin, another one (7) and a Progress Report (8) cover this survey. The findings are encouraging to those interested in nutrition and point to further needed research in food and nutrition. It is hoped that the results of the study will be of use in continued educational efforts to improve food production and eating habits.

PLAN OF SURVEY

This survey was made in 5 counties representing 3 regions of the state as indicated in the accompanying map.

The following description of agriculture is taken in part from Texas Station Bulletin 544 (1).

County	Region	Description of Agriculture
Brazos[1]	East Central or Post-Oak	Farming mostly on interior prairies and bottom lands. Soils—thin or shallow sandy with impervious subsoil. Leading products—cotton, corn, truck crops, beef cattle, dairy and poultry products.
Nacogdoches Rusk	Northeast or Northeast Sandy Lands	Pine covered, rolling topography. Farms small, fields small and irregular in shape, horse-drawn tools. Soil—sandy loam. Leading products—cotton, corn, vegetables, fruits.
Lubbock Lamb	Northwest or High Plains Cotton	Smooth level plains, grazing lands in less developed parts of area. Large-scale methods. Soils—light, sandy. Leading products—cotton, grain sorghums, beef cattle, dairy and poultry products.

[1]A few families living across the county line in Robertson and in Burleson county are included with the Brazos county families.

Random selection of families was made with assistance of the F.S.A. office and of the Extension Service of A. & M. College in all regions, and in Brazos county of the A.A.A. office also. Three tenure groups and three races were included, (a) owners or operators, white and negro; (b) renters, white and negro; (c) wage laborers, white, negro, and Mexican.[2] About 30% of the renter families were croppers, that is, the family received half of the crops in return for labor while the landlord furnished capital and equipment.

[2]This designation is used to differentiate the group of Latin-American families from the others of the white race and called "white" in this study.

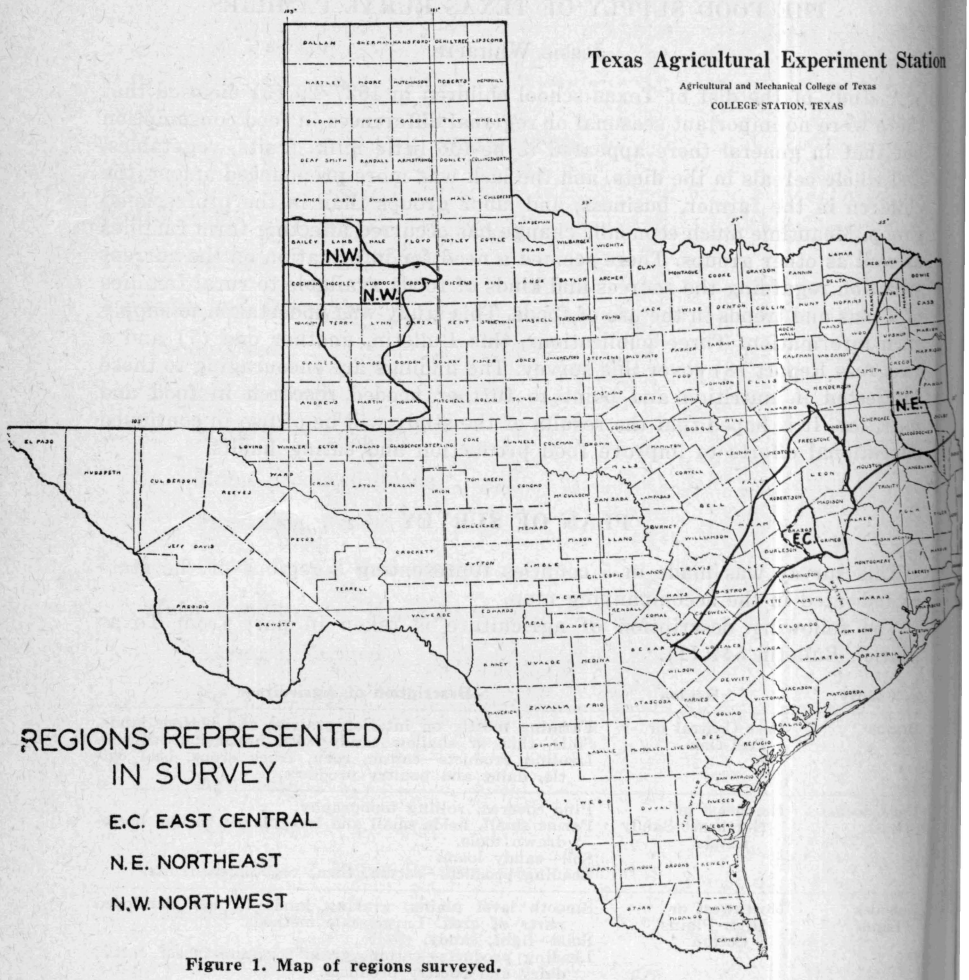

Figure 1. Map of regions surveyed.

Renters on a third-and-fourth basis made up about 60% of the renter group. The remaining 10% paid cash rent or had some other plan with the landowner. The representation in the sample of the half-and-half and third-and-fourth plans roughly approximates the proportions of the total families as of 1940 under these plans in the counties surveyed. A separate analysis was made for the families on the half-and-half basis and those on the third-and-fourth respecting the kinds of foods used, the facilities for home production of food, the average diet permitted by the food supply and probable shortages of foods which are especially good sources of certain nutrients. All analyses except that on shortages were made also for renters on some other basis than crop share. All analyses showed strikingly similar results

especially among the negroes and thus make it logical to include in one tenure group all of the renters. The wage laborers of the East Central and Northwest regions were for the most part farm laborers, but in the Northeast region the great majority of wage laborers worked either in the oil fields or the lumber mills and probably had higher wages than the farm laborers. However, all families in the survey lived in rural homes. No migrant laborers were included. Table 1 shows the distribution of the 400 families and 1,715 persons among races and tenure groups in each region.

TABLE 1

Number of Families and Persons in Survey

Region & county	Race	Number of families				Number of persons				Average number of persons per family		
		Owner	Renter	Wage Laborer	Total	Owner	Renter	Wage Laborer	Total	Owner	Renter	Wage Laborer
East Central Brazos	White	65	26	7	98	261	123	32	416	4.0	4.7	4.6
	Negro	12	15	17	44	60	100	77	237	5.0	6.7	4.5
	Mexican		1	10	11		5	47	52			4.7*
	Total	77	42	34	153	321	228	156	705			
	16 yrs. & over					241	130	96	467			
	Under 16 yrs.					80	98	60	238			
Northeast Nacogdoches & Rusk	White	47	20	20	87	159	91	88	338	3.4	4.5	4.4
	Negro	8	17	10	35	34	80	36	150	4.3	4.6	3.6
	Total	55	37	30	122	193	171	124	488			
	16 yrs. & over					137	106	81	324			
	Under 16 yrs.					56	65	43	164			
Northwest Lubbock & Lamb	White	43	47	28	118	174	215	111	500	4.1	4.6	3.9
	Negro			7	7			22	22			3.1
	Total	43	47	35	125	174	215	133	522			
	16 yrs. & over					114	130	79	323			
	Under 16 yrs.					60	85	54	199			
Grand total		175	126	99	400	688	614	413	1715			

*Includes the only Mexican renter family.

Each family's home was visited personally by a project worker[1] who, using a form especially devised for the purpose, secured the information and recorded it at that time. The family member interviewed was usually the housewife, but often the men and children also participated in the conversation. With each family the interview applied to the period of 12 months which ended on the day of the visit. The first visits were made in March, 1942, the last few in October, but most of the records had been taken by the end of July. The food items about which inquiry was made are listed here. Classification of the food items follows the common custom of grouping the foods which serve in general a similar purpose in nutrition.

[1]Acknowledgment is gratefully made to Mrs. Mabel P. Snyder, Mrs. Ruth Carter Wilson, Miss Marcillee Bowers, and Mrs. Mildred H. Gabbard for assistance in securing records and to Mrs. Snyder, Mrs. Gabbard, and Mrs. Ruth Mogford for help in tabulating data.

FOOD ITEMS ABOUT WHICH INQUIRY WAS MADE

Milk
- Sweet
- Sour
- Cream
- Ice cream

Cheese
- Cottage
- Yellow

Eggs

Meat
- Beef
- Veal
- Bologna, and other prepared
- Chili
- Pork, cured
- Pork, fresh
- Mutton
- Chevon (goat)
- Fish
- Shell fish
- Liver
- Rabbit
- Chicken
- Duck
- Goose
- Guinea
- Turkey

VEGETABLES

Legumes, ripe
- Beans
  - Pinto
  - Kidney
  - Navy
  - Lima
- Blackeye peas
- Cream peas
- Lentils

Starchy
- Corn
- Beans, green lima
- English peas
- Irish potatoes
- Sweet potatoes
- Parsnips

Leafy
- Brussel sprouts
- Cabbage
- Lettuce
- Sauerkraut
- Watercress
- Beet tops
- Collards
- Dandelion
- Kale
- Mustard
- Spinach
- Swiss chard
- Turnip tops

Green and Yellow
- Asparagus
- Beans, string
- Carrots
- Chives
- Cushaw
- Okra
- Pumpkin
- Peppers
- Rutabagas
- Snap peas
- Squash

Other
- Artichoke
- Beet
- Cauliflower
- Celery
- Cucumber
- Eggplant
- Garlic
- Kohlrabi
- Leeks
- Olives
- Onion
- Pickles, cucumber
- Pickles, other
- Pimentoes
- Radish
- Relish
- Soup
- Turnips

Tomatoes

FRUITS

Citrus
- Grapefruit
- Lemon
- Lime
- Orange
- Satsuma
- Tangelo
- Tangerine

Other
- Apple
- Avocado
- Apricots
- Banana
- Blackberries
- Boysen berries
- Dewberries
- Cantaloupes
- Currants
- Cherries
- Coconut
- Cranberries
- Dates
- Figs
- Fruit cake
- Grapes
- Grape juice
- Mulberries
- Muskmelons
- Peaches
- Pears
- Persimmons
- Pineapple
- Plums
- Pomegranate
- Prunes
- Raisins
- Raspberries
- Rhubarb
- Strawberries
- Youngberries
- Watermelon

CEREAL PREPARATIONS

Whole grain

Ready to eat
- Bran
- Bread, W.W.
- Bread, rye
- Crackers, Graham
- Grapenuts
- Krumbles
- Muffets
- Pep
- Puffed wheat
- Shredded wheat

To cook
- Cornmeal, whole
- Cracked wheat
- Flour, enriched
- Flour, rye
- Flour, W.W.
- Oats, rolled
- Popcorn
- Ralston
- Rice, brown
- Wheatena
- Whole wheat

Refined

Ready to eat
- Batter cakes
- Biscuits
- Bread, white
- Cornmeal mush
- Cornbread
- Corn pone
- Cornflakes
- Cream of Wheat
- Crackers, white
- Rice, puffed
- Tamales
- Tortillas
- Cakes
- Cookies
- Pies
- Doughnuts

To cook
- Barley
- Cornmeal, refined
- Flour plain
- Hominy grits
- Noodles
- Rice, white
- Macaroni
- Spaghetti

Fats
- Butter
- Margarine
- Lard
- Lard substitute
- Salad oil
- Salad dressing

Accessories
- Coffee
- Tea
- Baking powder
- Soda
- Flavoring
- Spices
- Chocolate
- Cocoa
- Soda water
- Coca Cola
- Gelatin
- Jello

Sweets
- Karo
- Sugar
- Honey
- Preserves
- Jam
- Jelly
- Sorghum
- Cane syrup
- Candy

Nuts
- Almonds
- Butternuts
- Chestnuts
- Hazelnuts
- Peanuts
- Pecans
- Pinenuts
- Walnuts
- Hickory

FINDINGS AND DISCUSSION

Foods Used

A count was made of the families who used, also of those who did not use, each food item in the list. This count provides the general picture of the kinds of foods available to these rural families as shown in Tables 2, 3, and 4. In Tables 3 and 4, the 3 tenure groups in each of the 3 regions are shown separately, but in Table 2 the data are combined for the 9 groups.

TABLE 2

Foods Most Used and Least Used

Food class	Food items in each class[1]				
	Total about which inquiry was made	Most used: Used by from 75% to 100% of families in 1 or more of the 9 tenure groups		Least used: Not used by any family in 1 or more of the 9 tenure groups	
	No.	No.	%[2]	No.	%[2]
Milk	4	4	100	0	0
Cheese	2	1	50.0	1	50.0
Egg	1	1	100	0	0
Meats	17	8	47.1	5	29.4
Cereals					
Whole	21	6	28.6	11	52.4
Refined	24	17	70.8	2	8.3
Fruits					
Citrus	7	3	42.9	3	42.9
Other	32	22	68.8	10	31.3
Vegetables					
Legumes	8	6	75.0	2	25.0
Starchy	6	5	83.3	1	16.6
Leafy	13	6	46.2	5	38.4
Green and yellow	11	6	54.5	2	18.2
Other	19	12	63.2	5	26.3
Fats	6	4	66.7	1	16.6
Nuts	9	4	44.4	4	44.4
Sweets	9	9	100	1	11.1
Accessories	12	10	83.3	0	0
Total number	201	123		53	

[1]In most cases the difference between the total number of food items and the sum of the most used and least used constitutes the number of food items used by from 1% to 74% of the families in 1 or more of the 9 tenure groups. There are 5 exceptions. In some tenure groups no family used cranberries, dates, "other" field peas, hickory nuts, and sorghum, while in 1 or more other tenure groups these same foods were used by from 75% to 100% of the families.

[2]Of total about which inquiry was made.

TABLE 3

Kinds of Foods Used by From 75% to 100% of Families

(*Means within the range of 75% to 99%)
(*% Means 100% of the families used the food)

Food	Regions and Counties								
	East Central Brazos			Northeast Nacogdoches & Rusk			Northwest Lubbock & Lamb		
	Owner	Renter	Wage Laborer	Owner	Renter	Wage Laborer	Owner	Renter	Wage Laborer
Milk									
Sweet milk	*	*%	*	*%	*	*	*%	*%	*%
Sour milk	*	*		*	*	*	*%	*%	*
Cream	*	*		*			*%	*	*
Ice cream	*	*		*		*	*%	*%	*
Yellow cheese	*			*		*	*%	*%	*
Eggs	*%	*%	*%	*%	*%	*%	*%	*%	*
Meat									
Beef	*	*	*	*		*	*	*	*
Bologna	*	*	*		*	*	*	*	*
Chili			*			*	*	*	*
Pork, cured	*	*%	*	*	*	*%	*	*%	*%
Pork, fresh	*	*		*	*	*	*%	*	*
Fish	*	*		*	*	*	*	*	*
Liver	*	*			*	*	*	*	
Chicken	*%	*	*	*	*%	*%	*%	*%	*
Cereals									
Whole									
Bran							*	*	
Whole wheat bread							*		
Graham crackers							*	*	
Shredded wheat							*		
Oats, rolled	*	*		*		*	*%	*	
Popcorn							*	*	
Refined									
Batter cakes		*	*	*		*	*	*	*
Biscuit	*	*	*	*%	*%	*	*%	*%	*%
Bread, white	*	*	*	*	*	*%	*%	*%	*%
Cornbread	*	*	*	*%	*%	*%	*%	*	*%
Corn pone					*				
Corn flakes	*					*	*	*	*
White crackers	*	*	*	*	*	*	*	*	*
Cakes	*	*%	*	*%	*%	*%	*%	*%	*%
Cookies	*	*	*	*	*	*	*%	*%	*%
Pies	*	*	*	*%	*%	*%	*%	*%	*%
Doughnuts							*		
Cornmeal, refined			*	*	*	*	*	*	*
Flour, plain and enriched	*%	*%	*%	*%	*%	*%	*%	*%	*%
Hominy grits							*		
Rice, white	*	*	*	*	*	*	*	*	*
Macaroni	*	*	*			*	*%	*	*
Spaghetti	*	*	*			*	*	*	*
Fruits									
Citrus									
Grapefruit						*	*	*	
Lemon	*	*	*	*	*	*	*	*	*
Orange	*	*	*	*	*	*	*	*	*
Other									
Apple	*	*	*	*	*	*	*%	*%	*
Apricot							*	*	
Banana	*	*	*	*	*	*	*%	*%	*
Blackberries				*	*	*	*	*	
Dewberries	*	*		*	*	*			
Cantaloupes						*	*	*	*
Cherries							*	*	
Coconut	*	*		*	*	*	*%	*	*
Cranberries							*	*	
Dates							*		
Figs	*								
Fruit cake							*		
Grapes							*	*	*
Grape juice							*	*	
Peaches	*	*	*	*		*	*%	*	*%
Pears				*			*		
Pineapple	*			*		*	*	*	*
Plums				*	*		*	*	*
Prunes	*	*				*	*%	*	
Raisins	*	*		*	*	*	*%	*	*
Strawberries							*	*	
Watermelon	*	*	*	*	*	*	*%	*	*%

TABLE 3 (con.)

Kinds of Foods Used by From 75% to 100% of Families

(*Means within the range of 75% to 99%)
(*% Means 100% of the families used the food)

Food	Regions and Counties								
	East Central Brazos			Northeast Nacogdoches & Rusk			Northwest Lubbock & Lamb		
	Owner	Renter	Wage Laborer	Owner	Renter	Wage Laborer	Owner	Renter	Wage Laborer
Vegetables									
Legumes									
Pinto beans	*	*	*	*	*	*%	*%	*	*
Navy beans							*		
Lima beans	*			*		*	*	*	
Blackeye peas	*	*	*		*				
Cream peas						*			
Other peas					*				
Starchy									
Corn	*	*	*	*		*	*%	*	*
Green lima beans				*	*				
English peas	*			*	*	*	*	*	*
Irish potatoes	*	*%	*%	*%	*	*%	*%	*%	*%
Sweet potatoes	*	*	*	*	*%	*	*%	*%	*
Leafy									
Cabbage	*	*	*	*	*	*	*%	*%	*
Lettuce	*	*		*	*	*	*%	*	*
Sauerkraut							*	*	*
Mustard	*	*	*	*	*	*	*	*	*
Spinach							*	*	*
Turnip greens	*	*	*	*%	*	*	*%	*	*
Green and yellow									
String beans	*	*		*	*	*	*%	*%	*
Carrots	*						*	*	
Okra	*	*	*	*	*	*	*%	*	*
Peppers	*	*	*	*	*	*	*	*	
Snap peas	*			*	*	*	*%	*	*
Squash				*	*		*		
Other									
Beets	*	*		*	*	*	*	*	
Celery							*		
Cucumbers	*	*		*	*	*	*	*	*
Onion	*	*	*	*%	*%	*%	*	*%	*%
Cucumber pickles	*	*		*	*	*	*%	*	*
Other pickles				*	*				
Pimetnoes							*		
Radish	*	*		*		*	*	*	*
Relish				*	*	*	*	*	*
Soup	*	*	*	*	*	*	*	*%	*
Turnips	*	*		*	*	*	*	*	*
Tomatoes	*	*	*%	*%	*	*%	*%	*%	*%
Fats									
Butter	*	*	*	*	*	*	*	*%	*
Lard and substitute	*%	*%	*%	*%	*%	*%	*%	*%	*%
Salad dressing	*			*	*	*	*%	*%	*
Nuts									
Peanuts							*	*	*
Pecans						*	*%	*	*
Walnuts							*	*	
Hickory	*								
Sweets									
Karo							*	*	*
Sugar	*%	*%	*%	*%	*%	*%	*%	*%	*%
Honey							*	*	
Preserves	*			*	*	*	*	*	*
Jam	*						*		
Jelly				*	*	*	*	*	*
Sorghum							*		
Cane syrup	*	*	*	*%	*	*		*	*
Candy	*	*	*	*	*	*	*%	*	*
Accessories									
Coffee	*	*	*	*	*	*	*	*	*
Tea	*			*		*	*	*	*
Baking powder	*%	*%	*%	*%	*%	*%	*%	*%	*%
Soda	*%	*%	*%	*%	*%	*%	*%	*%	*%
Flavoring	*%	*	*%	*	*%	*%	*%	*%	*%
Spices	*%	*	*%	*	*	*%	*%	*%	*%
Cocoa				*	*	*%	*%	*	*
Soda water	*	*	*	*	*	*	*	*	*
Coca Cola			*			*	*	*	
Jello						*	*	*	
Total number/group	78	66	51	78	70	85	113	101	80
Total number/region	82			94			115		

TABLE 4

Foods Not Used by Any Family in the Groups Indicated by *

Food	Regions and Counties								
	East Central Brazos			Northeast Nacogdoches & Rusk			Northwest Lubbock & Lamb		
	Owner	Renter	Wage Laborer	Owner	Renter	Wage Laborer	Owner	Renter	Wage Laborer
Cottage cheese			*						
Meats									
Veal						*			
Mutton			*		*			*	
Chevon									*
Duck									*
Goose			*				*		*
Cereals									
Krumbles		*	*	*	*	*			
Muffets		*	*	*	*				
Pep			*	*	*	*			
Puffed wheat					*				
Cracked wheat		*	*		*	*			
Enriched flour					*				
Rye flour	*	*	*			*	*	*	*
Ralstons		*	*	*					
Brown rice		*	*		*			*	*
Wheatena		*	*	*	*	*			
Whole wheat			*	*	*	*			*
Tortillas									*
Barley			*	*	*		*		*
Fruits									
Lime		*						*	
Satsuma			*		*	*			*
Tangelo			*	*	*	*	*	*	*
Avocado		*	*	*	*		*		
Boysen berries		*	*	*	*	*		*	
Currants			*						*
Cranberries			*						
Dates			*						
Persimmons								*	
Pomegranite			*	*	*	*	*	*	*
Raspberries		*			*	*		*	*
Rhubarb		*	*		*				
Youngberries		*	*	*	*		*	*	*
Vegetables									
Lentils		*	*	*	*	*		*	*
Other peas									*
Parsnips		*	*	*	*	*		*	*
Brussel sprouts	*	*	*	*	*	*	*	*	*
Watercress	*	*	*	*	*	*	*	*	*
Beet tops					*				
Dandelion	*	*	*	*	*	*	*	*	*
Kale					*	*		*	*
Asparagus		*	*						
Chives	*	*		*	*	*	*	*	*
Artichoke		*	*	*	*	*	*	*	*
Cauliflower			*						
Kohlrabi				*	*	*	*	*	*
Leeks		*	*	*	*		*	*	*
Olives			*						
Fat									
Salad oil			*		*				
Nuts									
Chestnuts			*	*	*				
Hazelnuts				*	*				
Pinenuts	*	*	*	*	*	*	*	*	*
Hickory								*	*
Sweets									
Sorghum				*					
Total number for group	6	23	36	25	35	22	15	22	27
Total number for region		39			38			32	

It will be seen from Tables 2 and 3, that of the 201 food items listed, more than ½ of them, 123, were used by from 75% to 100% of the families in 1 or more of the 9 groups, while ¼ or 53 items, were not used by any family in 1 or more of the 9 groups. In this count, lard and lard substitute were combined as were also plain and enriched flour. There was very little overlapping between the most used and least used foods. Only 5 food items which were not used by any family in 1 or more groups were used by from 75% to 100% of the families in 1 or more other groups. These foods are cranberries, dates, "other" field peas, hickory nuts, and sorghum. In addition to the foods listed in Table 3, there were 20 items which were used by 50% to 74% of the families in 1 or more groups. Another additional 14 items were used by 25% to 49% of the families, while no more than 24% of any group of families used 38 other items.

Foods having the distinction of a place in the food supply of all 400 families included only sugar, white flour, cooking fat, baking powder, and soda; but eggs miss this distinction by 1 family, Irish potatoes by 2 families, and milk by 5 families. Meat of all kinds together, but not of any one kind, was used by every family. Some but not all the kinds of vegetables and fruits listed were in the food supply of every family.

There is a marked similarity between the 3 tenure groups of each region in the foods most used. Foods used in the East Central region total 82, in the Northeast 94, and in the Northwest 115. The excess for the Northwest region is due chiefly to more kinds of whole cereals, fruits, vegetables, and sweets.

The 53 food items reported as "not used" by every family in one or more of the 9 groups are shown individually in Table 4. Only 4 items—Brussel sprouts, watercress, dandelion, and pinenuts—were not used by any of the 400 families. Three other items, rye flour, chives, and artichokes, were each reported as not in the food supply of 8 out of the 9 groups. The food classes with the largest percentage (31.3 to 52.4) of the little used foods are cheese, whole cereals, fruits, leafy vegetables, and nuts. Only milk, eggs, and accessories were not reported as "not used" by some portion of each group of families.

Comparing regions (Table 4) the Northwest had the smallest number of "not used" foods, 32, the East Central and the Northeast practically the same as each other, 39 and 38. Among tenure groups those in the East Central show the most marked differences in the number of foods not used. Here the wage laborers reported 6 times, and renters 4 times, as many not used as the owners reported. In the Northwest region owners reported fewer and wage laborers more foods not used than did the renters. But in the Northeast region, owners and wage laborers had similar records, with fewer foods not used than had the renters.

Sources of Foods

Method of Analysis

The sources of foods available to the families in this study are classified under three heads—(a) produced at home, (b) purchased, and (c) other sources. Other sources include gift, wild supply, trade, share, pay for work, and relief. A count was made of the food items obtained from each source and the relationship between the three sources expressed as a percentage, using the total number of items from the three sources as base for the calculation for each tenure group. Each source, when found in this analysis to have a value of 75% or over, was regarded as the preponderant one. Tables 5, 6, and 7 show what foods came preponderantly from each source. For comparison between tenure groups, home-produced foods with values of from 50% to 74% for wage laborers are included in Table 5. For brevity, cereals, poultry, fruits, and vegetables with exception of tomatoes, are shown as classes rather than individual foods in Tables 5, 6, and 7. Mutton and chevon are considered together as they provide similar meat and both are infrequently used.

TABLE 5

Foods Produced at Home to the Extent Indicated as Compared with Purchase and Other Sources

(* Shows home production of the food)

	75% to 100% home produced																		50% to 74% home produced						
Region and County →	East Central Brazos							Northeast Nacogdoches & Rusk						Northwest Lubbock & Lamb				East Central		North-east	North-west			
	Owner		Renter		Wage Laborer			Owner		Renter		Wage Labor'r		Owner	Renter	Wage Labor'r		Wage Laborer						
Foods ↓	White	Negro	White	Negro	White	Negro	Mex.	White	Negro	White	Negro	White	Negro	White	White	White	Negro	White	Negro	Mex.	White	Negro	White	Negro
Milk	*	*	*	*				*		*				*	*			*			*		*	*
Eggs	*	*	*	*	*			*	*	*				*	*				*	*	*		*	
Meats																								
Pork										*														
Mutton & chevon		*																						
Liver	*	*	*	*				*	*	*								*						
Poultry	*	*	*	*	*	*	*	*	*		*			*	*								*	
Vegetables																								
Legumes																		*						
Starchy	*	*	*	*				*	*	*	*							*		*				
Leafy	*	*	*	*				*	*	*	*							*	*	*	*	*		
Green & yellow	*	*	*	*	*			*	*	*	*								*	*	*		*	
Tomatoes	*	*	*	*	*			*		*											*			
Other	*	*	*	*	*			*	*	*	*								*	*	*	*	*	
Butter	*	*	*					*		*				*	*	*	*	*						
Peanuts								*	*	*	*													
Sweets																								
Preserves[1]	*	*	*	*	*	*		*	*	*	*	*	*			*								
Candy																					*			

[1]Includes jams, jellies and marmalades

TABLE 6

Foods Purchased to the Extent of 75% to 100% as Compared with Home Production and Other Sources

(* indicates purchase)

Food	Region and Counties																	
	East Central Brazos							Northeast Nacogdoches and Rusk						Northwest Lubbock and Lamb				
	Owner		Renter		Wage Laborer			Owner		Renter		Wage Laborer		Owner	Renter	Wage Laborer		
	White	Negro	White	Negro	White	Negro	Mex.	White	Negro	White	Negro	White	Negro	White	White	White	Negro	
Cheese		*		*	*	*	*	*	*	*	*	*	*		*	*	*	
Meats																		
Beef	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Pork							*					*	*					
Liver							*						*					
Mutton & chevon							*		*		*	*	*					
Fish							*							*	*	*	*	
Cereal, whole	*		*		*	*	*			*		*		*	*	*	*	
Fruits																		
Citrus	*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	
Other							*					*						
Vegetables																		
Legumes							*					*						
Nuts																		
Pecans									*				*	*	*	*	*	
Peanuts												*						
Other					*									*	*	*	*	
Fats																		
Butter						*	*											
Lard or substitute					*	*	*					*	*			*	*	
Margarine	*	*	*	*	*	*	*	*		*		*		*	*	*		
Salad dressing	*	*	*	*	*	*	*		*				*			*	*	
Sweets																		
Sugar	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Syrup	*	*	*	*	*	*	*			*	*	*	*	*	*	*	*	
Karo	*		*	*	*	*		*	*	*	*	*	*	*	*	*	*	
Honey	*		*				*					*		*	*	*	*	
Candy			*	*	*	*	*		*		*							
Accessories	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

TABLE 7

Foods Furnished from "Other Sources" to the Extent of 75% to 100% as Compared with Home Production and Purchase

(* indicates "Other Sources")

Food	Region and Counties																	
	East Central Brazos							Northeast Nacogdoches and Rusk						Northwest Lubbock and Lamb				
	Owner		Renter		Wage Laborer			Owner		Renter		Wage Laborer		Owner	Renter	Wage Laborer		
	White	Negro	White	Negro	White	Negro	Mex.	White	Negro	White	Negro	White	Negro	White	White	White	Negro	
Meat																		
Rabbit	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Mutton & chevon			*	*												*		
Nuts																		
Pecans		*	*			*	*			*	*							
Other nuts		*		*		*		*	*	*	*							
Sweets																		
Honey		*		*	*	*			*		*							

It is important to note that these records are entirely qualitative. Many families obtained a number of foods from more than one source; but no attempt was made to estimate the relative amount of any food from the different sources. From comments by family members it was learned that foods were purchased chiefly in times of scarcity of home supply, and that purchased foods were usually eaten less frequently, especially by renters and wage laborers, than the same kinds of food from the home produced supply. Nevertheless the analysis of these data on a qualitative basis affords a general picture of the dependence of the majority of these rural families upon one source or another for certain of their foods. In this and several other analyses it appeared desirable to keep races separate.

Home-Produced Foods

It is evident (Table 5) that within each region, and within race groups, owners and renters obtained practically the same foods by home production, but wage laborers fewer than the other two tenure groups. Owners and renters in all regions produced their own supply of milk, eggs, poultry, and butter. In the East Central and Northeast regions, the home furnished also liver, all classes of vegetables except legumes, and preserves (including jams, jellies, and marmalades). Peanuts were mostly home produced in the Northeast region. White wage laborers in the East Central region obtained chiefly from their home supply 6 of the 11 foods listed for owners and renters there. For other wage laborers in the 3 regions only 1 or 2 of 3 items — poultry, butter, and preserves — were furnished to the extent of 75% or more by the home. But in 1 or more of the wage groups, milk, eggs, liver, poultry, all classes of vegetables, and candy were obtained to the extent of 50% to 74% from home supply. Clearly, home-produced foods were not as great a proportion of the total supply for wage laborers as for owners and renters.

Negro groups in general obtained fewer foods chiefly by home production than did the white. In the Northeast region where race group differences were most marked the white owners obtained 12 foods chiefly from home supply, negro 9, the additional 3 items for the white being milk, tomatoes, and butter. The home produced foods of the white renters in this region included 6 items which were not in the home supply of the corresponding negro group — milk, eggs, pork, liver, tomatoes, and butter. However, negro renters, but not the white, obtained their poultry chiefly from home supply. In the Northwest region race comparison is possible only for wage laborers who produced few foods at home—white laborers, butter, poultry, and preserves; negro, butter only. In the East Central region negro owners produced mutton and chevon in addition to all of the foods produced by the white owners. White renters obtained one more food, butter, from home supply than did the negro. But among laborers in the East Central region home produced foods totaled 6 for white and 2 for negro. Mexican laborers obtained only poultry chiefly from home supply.

Purchased Foods

Beef, sugar, and accessories were obtained chiefly by purchase in all 17 groups of families (Table 6). Almost as important among purchased items were citrus fruit, syrup, karo, cheese, whole cereal, margarine, and salad dressing.

Wage laborers purchased a greater proportion of their food than did the other two tenure groups. In addition to the foods purchased by owners and renters, lard and lard substitute were purchased by laborers in all 3 regions, and in one or both of the East Central and Northeast regions, pork, liver, fruits other than citrus, legumes, pecans, peanuts, other nuts, and butter were obtained chiefly by purchase.

Regional differences in purchased foods aside from those noted for the tenure groups, are due to foods which are of little importance in the total food supply. Mutton and chevon were obtained chiefly by purchase only in the Northeast region and by the Mexican laborers of the East Central region; candy in both the Northeast and East Central; fish by the Mexican group and those in the Northwest region; and pecans, and other nuts in the Northwest.

Certain prominent foods were obtained by both purchase and home production, but to a less extent than the limit arbitrarily set (75%) as preponderant when comparing one source with another. Food items thus obtained included pork, ripe legumes, fruits other than citrus, flour, and cornmeal.

Foods from Other Sources

As shown in Table 8, other sources provided the chief supply of only 5 little-used food items, 3 of them to some groups of families in the East Central region, 4 to some Northeast groups, and 2 to some in the Northwest.

TABLE 8

Count of Food from Other Sources

Region and County	Total No. families	Number families obtaining foods from other sources						Number food items obtained from other sources					
		Gift	Wild supply	Share	Trade	Pay for work	Relief	Gift	Wild	Trade	Share	Pay for work	Relief
East Central Brazos	153	92	128	4	3	3	3	256	508	5	3	4	18
Northeast Nacogdoches and Rusk	122	72	121	3	—	4	3	200	700	3	—	7	38
Northwest Lubbock and Lamb	125	106	12	3	7	1	—	413	28	4	14	1	—
Total	400	270	261	10	10	8	6	869	1236	12	17	12	56

However, other sources were of greater importance than these data indicate. Only 30 families out of the 400 did not get some food from other sources. Negro families much more than white obtained food from other sources. Out of the total of 201 food items there were but 17 which were not included for one or more families in the list of foods from other sources. These 17 items were 11 of 12 accessories, cheese, margarine, salad dressing, karo, sugar, and candy. Foods from wild supply included honey, fish and 6 other meats, 7 fruits, 2 vegetables, and 4 nuts. Among gifts were lard, cocoa, 5 cereals, 13 kinds of meat, 28 fruits, 38 vegetables, 5 nuts, and 6 sweets. Gift and wild supply were by far the most common other sources with respect both to number of families and number of food items involved (Table 8).

Chief Facilities for Home Production of Food

The chief facilities for home production of food refer to total acreage farmed, amount of land to grow food for home use, number of gardens per year, ownership of livestock and poultry along with constancy of the supply of food derived from farm animals, and methods of food preservation employed. Data respecting these considerations are given in Table 9.

TABLE 9

Chief Facilities for Home Production of Food

Region and County →	Owners					Renters					Wage Laborers						
	East Central Brazos		Northeast Nacogdoches and Rusk		Northwest Lubbock and Lamb	East Central Brazos		Northeast Nacogdoches and Rusk		Northwest Lubbock and Lamb	East Central Brazos			Northeast Nacogdoches and Rusk		Northwest Lubbock and Lamb	
Total number families →	White 65	Negro 12	White 47	Negro 8	White 43	White 26	Negro 15	White 20	Negro 17	White 47	White 7	Negro 17	Mex. 11	White 20	Negro 10	White 28	Negro 7
Acres farmed																	
Average	67.5	52.1	53.8	29.6	227.3	79.8	40.8	47.1[1]	24.3	181.3	—	—	—	—	—	377.8[2]	332.8
Range	6–410	14–85	3–300	3–56	5–900	4–726	17–83	16–100[1]	8–60	30–350	—	—	—	—	—	100–800	150–620
Food acreage, percent families																	
none	0	0	0	0	0	0	0	0	0	0	0	25	27	20	30	4	43
½ acre or less	16	8	11	12	9	35	14	25	18	13	50	62	54	60	40	61	29
Over ½ acre to 1 acre	30	33	21	25	14	27	21	20	35	26	33	12	18	10	30	14	0
Over 1 acre	54	58	68	62	77	38	64	55	47	61	17	0	0	10	0	21	29
Garden spring only	20[3]	8[3]	23	12	2	27[3]	33[3]	45	65	26	43[3]	53	36	45	50	21	14
Garden, spring and fall	54[3]	83[3]	77	88	84	54[3]	47[3]	55	35	47	29[3]	24	36	35	20	57	43
Milk																	
Percent families owning cows	100	83	96	88	98	100	93	85	35	96	43	18	0	50	20	32	0
Percent families owning 1 cow	9	33	11	50	7	12	20	20	12	11	29	18	0	35	20	18	0
Range in no. cows (above 1)	2–63	2–8	2–60	2–3	2–100	2–16	2–6	3–25	2 & 4	2–12	2	0	0	2 & 5	0	2	0
Average number cows	5.1	2.9	8.9	1.6	10.1	4.3	2.7	5.6	2.7	4.3	1.3	1	0	1.6	1	1.6	0
Percent families never without	91	50	89	38	98	88	27	80	41	83	86	88	73	95	80	79	57
Range, months without	.25–5	2–7	1–5	2–4	2	1–2	2–6	2–9	1–12[4]	.25–8	3	3 & 11	6 & 12	12	3 & 4	3–10	2–8
Eggs																	
Percent families owning hens	100	100	98	100	100	100	100	95	94	98	100	76	73	70	50	68	14
Range in number hens	13–300	14–90	12–200	4–65	12–500	20–135	8–75	5–50	6–30	6–250	13–40	3–30	4–20	4–50	5–13	1–118	1
Average number hens	68.1	31.6	42.3	24.4	158.5	58.1	28.6	25.0	14.5	101.5	28.6	8.7	11.9	21.8	8.4	31.6	1
Percent families never without	57[5]	25[5]	68	38	98	42	40	45	29	92	14	18	64	65	71	61	43
Range, months without	.5–4	1–4	.25–6	1–3	?	1–5	1–3	1–6	1–6	1–4	1.5–2	.5–nearly 12	1–12	.5–6	3	1.5–12	3
Meat																	
Cattle																	
Percent families owning	20	50	26	38	63	0	0	20	0	36	0	0	0	10	0	4	0
Range number owned	2–100	1–20	1–110	1–4	1–30	0	0	1–5	0	1–8	0	0	0	1	0	—	0
Average number owned	32.8	6.9	18.2	2.3	6.0	0	0	3.3	0	2.1	0	0	0	1	0	1	0
Hogs																	
Percent families owning	46	67	72	75	91	46	53	85	82	89	43	41	9	5	40	50	29
Range, number owned	1–100	1–9	2–59	1–4	1–60	1–13	1–17	3–7	1–5	2–50	1–6	1–2	—	—	1	1–27	1–2
Average number owned	13.1	6.1	8.1	2.5	15.9	5.3	5.1	4.1	2.4	10.6	3	1.6	3	2	1	4.8	1.5
Poultry																	
Percent families eating fryers	?[6]	75	98	100	98	96	60	100	100	100	57	59	64	100	100	82	100
Range number fryers/year	6–180	20–80	2–130	2–63	10–150	24–78	12–76	8–85	2–70	2–175	4–39	6–30	3–15	6–125	6–50	3–100	6–40
Av. no. fryers/family/yr.	?	40.3	34.6	26.8	71.7	?	48.3	33.8	22.7	66.2	20.3	17.2	10.3	42.4	18.7	34.7	18.6
Percent families eating hens	?[6]	58	87	75	63	46	47	65	47	49	29	59	54	95	100	18	29
Range number hens/year	4–26	2–20	1–25	1–4	2–25	1–12	3–20	3–12	1–4	1–26	6 & 12	1–3	1–8	1–15	1–12	1–4	1–2
Av. no. hens/family/year	10.2	9.0	6.3	2.7	7.0	7.1	9.8	5.1	2.6	6.2	—	2.1	3.3	7.4	6.0	2.2	—

TABLE 9 (con.)

Chief Facilities for Home Production of Food

Region and County →	Owners					Renters					Wage Laborers						
	East Central Brazos		Northeast Nacogdoches and Rusk		Northwest Lubbock and Lamb	East Central Brazos		Northeast Nacogdoches and Rusk		Northwest Lubbock and Lamb	East Central Brazos			Northeast Nacogdoches and Rusk		Northwest Lubbock and Lamb	
Total number families →	White 65	Negro 12	White 47	Negro 8	White 43	White 26	Negro 15	White 20	Negro 17	White 47	White 7	Negro 17	Mex. 11	White 20	Negro 10	White 28	Negro 7
Preservation																	
Percent families hilling veg..	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—
Percent families drying fruits and vegetables.....	2	—	8	12	5	—	7	—	—	2	—	—	—	—	—	4	—
Percent families freezing meat	2	—	—	—	28	—	—	5	—	8	—	—	—	5	—	4	—
Percent families freezing fruits and vegetables.....	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—
Percent families canning meat.....	5	—	13	12	12	—	—	—	—	11	—	—	—	—	—	—	—
Percent families canning hominy.....	—	—	—	—	9	—	—	5	—	6	—	—	—	—	—	4	—
Percent families canning fruits.....	94	100	100	100	98	100	87	95	94	96	100	71	9	100	100	89	71
Percent families making preserves, jam, jellies.....	69	75	98	88	95	46	73	95	100	87	71	71	27	100	100	86	29
Percent families canning vegetables.....	88	83	98	100	98	100	87	95	94	100	86	65	36	100	90	93	71
Number kinds fruit canned..	8	7	11	7	12	6	5	6	6	11	4	5	2	7	5	10	4
Number kinds fruits for preserves, jams and jelly.....	8	7	9	6	12	7	8	9	6	14	5	6	3	10	6	13	3
Number kinds vegetables canned.....	21	21	23	18	22	20	20	18	15	23	12	17	6	19	14	22	6

[1]Exclusive of one family that farms 4000 acres.
[2]Exclusive of one family farming 2200 acres.
[3]Information not secured from all families.
[4]One family had no milk.
[5]Some families not asked this question.
[6]64 families ate some kind of poultry. Record for fryers and hens not separated for most families.

Acreage Farmed

Differences in acreage farmed were observed between regions and also between race groups. In the East Central and Northeast regions owners and renters worked relatively small farms, 24 to 80 acres, those in East Central being the larger; while in the Northwest region the average cultivated area was near 200 acres. The acreage farmed by negro families averaged less than for corresponding white groups, in 3 out of 4 comparisons the negroes farmed approximately half the average area worked by the white families. The smallest farms in negro groups were in some cases larger than the smallest ones in corresponding white groups, but the largest farm in negro groups was in no case as great as the largest farm of corresponding white groups.

Food Acreage

Every family among the 300 owners and renters had some land used for food production, but among the 100 wage laborers, in 5 of the 7 groups from ⅕ to ⅖ of the families used no land to raise food. The most common food acreage among wage laborers, ½ acre or less (for ⅓ to ⅔ of the families) was used by relatively few owners and renters. In most owner and renter groups from ½ to ⅔ of the families had 1 acre or more planted in food crops. The larger plots averaged 3 acres and for families in most groups ranged from 1.5 to 7 acres, but a few families in the Northwest region reported 10 to 20 acres for raising food. Race differences were not marked; food plots of 1 acre and above were as common among negro as white owners and renters, but more negro than white owners and renters used ½ acre to 1 acre, and fewer negro used ½ acre or less. Among wage laborers a greater proportion of negro and Mexican than white used the smaller food plots.

Gardens in both spring and fall were much more common than a spring garden only, among all owners and the wage laborers of the Northwest region. Among renters, spring and fall gardens were somewhat more common than the one garden in spring. But relatively more gardens in spring only were grown by negro renters in the Northeast region, and the white and negro wage laborers in the East Central and Northeast regions. Equal proportions of Mexican laborers had 1 garden and 2 gardens per year.

The food acreage is of interest in connection with the supply of fruits and vegetables. A comparison was made of families using larger plots (over ½ A) with those using smaller ones (½ A or less) (Table 10).

Among wage laborers no influence was observed of food acreage upon the presence of fruits and vegetables in the food supply. But among owners and renters a greater proportion of the families with the larger food acreage had fruits and vegetables to eat than did the families with smaller acreage. The greater use of fruits and vegetables accompanying cultivation of larger food

TABLE 10

Food Acreage in Relation to Supply of Fruits and Vegetables for Owners and Renters Together*

Food Class	Extent to which proportion of families in the group with the larger food acreage (over ½ A) exceeded the proportion in the group with smaller food acreage (½ A or less) in having fruits and vegetables in their food supply.	
	White	Negro
	Percent	Percent
Fruits		
Citrus	8	52
Other	16	40
Vegetables		
Legumes	13	23
Starchy	10	6
Leafy	6	11
Green and yellow	15	60
Tomatoes	3	4
Other	14	46

*Among wage laborers no consistent relationship appeared between food acreage and proportion of families using the foods in each class.

acreage was more marked among negro than white families. However, it must be admitted that a measure of this relationship is merely apparent, or else an indirect one, since the more general use of citrus fruit by families with greater food acreage did not depend upon home production. Citrus fruit is not grown in any region of the survey.

Milk Supply

Milk cows were owned by the great majority, 83% to 100%, of owners and renters, although among negro renters of the Northeast region, only 35% owned cows. The proportion of negro families owning only 1 cow was from 2 to 5 times as great as for white families, with one exception —in the Northeast region twice the proportion of the white as of negro renters owned only 1 cow. The average number of cows owned was much smaller for all negro owners and renters than for the white.

Among wage laborers, no Mexican family nor any negroes in the Northwest region owned cows. But of the remaining wage laborer groups, 18% to 50% had their own milk supply usually from 1 or 2 cows, although each of 3 families of the Northeast region owned 5 cows.

The record of a constant supply of milk is fairly similar for the 3 regions though with slight superiority of Northwest owners and Northeast wage laborers. A larger percentage of white owners and renters than of corresponding negro groups was never without milk. Also the time during which white families had no milk was generally shorter than for negro families. That wage laborers had nearly as good record for constant supply of milk as owners and renters is to be explained largely by the fact that

milk was a frequent item among food gifts and 40% of the wage laborers used canned milk. Also laborers in the Northeast region probably had more money available with which to buy food than did other laborer groups. In the East Central region only, inquiry was made as to how long the cows were dry. The modal period was 3 months; more periods were above 3 months than below; and some cows were dry as long as 7 months.

Egg Supply

Ownership of hens was more common than ownership of cows. Only 4 families among 300 owners and renters had no hens; all white wage laborers in the East Central region and from 50% to 77% of the families in 5 other laborer groups owned hens. Just 1 negro laborer of the Northwest region reported hen ownership—of one lone hen!

The average size of the flocks in the Northwest region was much greater for owners (158.5 hens) and renters (101.5 hens) than for corresponding groups of the other two regions. White owners and renters in the East Central region had flocks of about ½ the size, and in the Northeast region of about ¼ the size of flocks of corresponding groups in the Northwest region. Negro owners and renters had flocks about ½ the size of the corresponding white groups. Flocks of the 3 white wage laborer groups (average 21.8, 28.6, and 31.6 hens) were comparable with those of negro owners of the East Central and Northeast regions, the white renters of the Northeast region, and the negro renters of East Central. Flocks owned by the remaining wage laborer groups averaged much smaller (8.4 to 11.9 hens).

In constancy of egg supply, owner groups (omitting East Central owners from the comparison on account of incomplete data) outranked corresponding renter groups. Both white and negro renters surpassed the corresponding wage laborers in the East Central and Northwest regions. Mexican laborers of the East Central region, and both white and negro laborers in the Northeast, and white in the Northwest region had eggs for as much of the time as the white owners. Fewer negro owner and renter families had a constant supply of eggs than corresponding white groups, although negroes were without eggs no longer than were white families.

The larger dairy herds and the larger flocks of hens in the Northwest region may explain in part why the families there obtained fewer foods chiefly from the farm than was done in the other two regions. The surplus milk and eggs probably yielded a cash income which permitted relatively more purchases of fruits and vegetables than in the other regions. But also the explanation in part may be in the greater ease of producing fruits and vegetables in the other two regions where there is a longer growing season and more rainfall than in the Northwest region.

Meat Supply

Beef cattle were owned chiefly by the farm owners, all such groups in the

three regions having some cattle, but some white renters and wage laborers in the Northeast and Northwest regions also owned cattle. From ⅙ to ½ as many families butchered as owned beef cattle. In all, 31 families butchered a total of 41 beeves. The usual comment was "beef cattle are too high to kill." But as a source of income, beef cattle probably contributed to the food supply of rural families.

Hogs were owned by every group of families in the survey, the white families of the Northwest region leading in each tenure group both in number of families owning hogs and average number owned. Similar proportions of owners and renters of the same race and region owned hogs. Owners and renters exceeded laborers among whom hogs were owned by only 1 Mexican family, 1 white family of the Northeast region, and ¼ of the negro families in the Northwest region. The average number of hogs owned by negro families was about ½ that owned by corresponding white groups.

As many or more negro owners as white in all 3 regions butchered hogs; similarly with renters in the East Central and laborers in the Northwest region. But the greatest and the average number of hogs killed by negro families was lower than for the white in 6 of the 7 corresponding groups. Usually the average weight of hogs killed by negroes was less than of those butchered by white families.

Fryers were eaten by the great majority of families. Owners and renters had fairly similar records for the average number of fryers eaten during the year, owner groups consuming from 35 to 72 fryers, renter groups from 23 to 66. Northeast white laborers ate more fryers than either white owners or renters of the same region, but other laborers ate approximately ½ as many as corresponding owner and renter groups. More cash in the hands of Northeast laborers may explain their high record. Negro families ate fewer fryers than did the white in each tenure group.

Compared with fryers, hens were eaten by a much smaller percentage of most groups of families, the differences being more marked among owners and renters than laborers. The average number of hens eaten was much smaller than of fryers, the range for hens being 2.1 to 10.2. Usually the white families ate a greater number of hens than did the corresponding negro group, the average for owners usually exceeded that of renters of the same race and average for renters exceeded that of laborers. Average number of hens eaten was higher among East Central owners and renters, while those in the Northwest held second rank; but among laborers those of the Northeast region ranked first.

A summary of the home produced meat supply in the 3 regions is presented in Table 11.

TABLE 11

Meat Supply Produced at Home

Animals used for meat supply	Region and total number families					
	East Central 153		Northeast 122		Northwest 125	
	Number	Percent	Number	Percent	Number	Percent
Fryers						
Families eating	138	90.2	121	99.2	121	96.8
Average eaten/family	49.3		32.2		59.2	
Hens						
Families eating	70	45.8	97	79.5	57	45.6
Average eaten/family	6.2		5.8		5.8	
Hogs						
Families owning	70	45.8	76	62.3	97	77.6
Families butchering	105	68.6	70	57.4	70	56.0
Average butchered/family	1.7		1.4		0.9	
Beef cattle						
Families owning	20	13.1	21	17.2	45	36.0
Families butchering	5	3.3	5	4.1	21	16.8
Total butchered	5		5		31	
Liver from home-butchered beef and hogs						
Families eating	100	65.4	67	54.9	75	60.0
Sheep						
Families owning	4	2.6	0	0	2	1.6
Families butchering	2	1.3	0	0	0	0
Total butchered	7		0		0	
Goats						
Families owning	3	2.0	1	0.8	3	2.4
Families butchering	3	2.0	1	0.8	3	2.4
Total butchered	6		3		?	
Fish from tank on farm						
Families eating	8	5.2	1	0.8	15	12.0
Rabbit						
Families owning	2	1.3	0	0	0	0
Families eating	2	1.3	0	0	0	0

Hogs and poultry were by far the most common sources of meats in the home supply. The Northeast region had the greatest proportion of families eating fryers and hens; but the Northwest reported the greatest number of fryers eaten per family, the average being nearly twice the lowest, that in the Northeast region. The average number of hens eaten per family did not differ materially in the 3 regions. The proportion of families butchering hogs was slightly greater in the East Central region than in the other 2 regions; the average number of hogs butchered in the East Central region was approximately 30% greater than in the Northeast and twice as great as in the Northwest. In home butchered beef the Northwest region led, but even here only 17% of the families had such meat, and only 31 beef cattle were slaughtered. Practically all families who butchered hogs or beef cattle ate all or part of the liver. Fish, chevon, mutton, and rabbit made a small proportion of the total meat supply. The Northwest region led in the home production of fish and chevon, the East Central in mutton. Only 2 families, in the East Central region, raised rabbits.

Methods of Home Preservation of Food

The relative importance at the time of the survey of several methods of food preservation is brought out in Table 9. Meager use was made of hilling, drying, and freezing. Canning, used extensively for fruits and vegetables, was little used otherwise. Making of preserves, jams, marmalades, and jellies ranked next after canning.

Only 2 owner families, in the Northwest region, hilled vegetables. Drying of fruits and vegetables was practiced most in the Northeast region, but only by a few owners there; still smaller proportions of white families in each tenure group in the Northwest region and of white owners and negro renters of the East Central had dried foods.

Freezing of meat was done chiefly in the Northwest region, by more than ¼ of the owner families, but by only 1/3 as many of the renters and 1/7 as many of the laborers. One owner family in the East Central region and 1 renter in the Northeast region froze meat. Only 1 family, a renter in the Northwest region, resorted to freezing of fruits and vegetables.

Meat and hominy were canned to a very limited extent. In contrast, fruit was canned by 369 families (92%) of the entire 400 in the survey, vegetables by 365 families (91%), and preserves, jams, jellies, and marmalades were made by 324 families (81%). As shown in Table 9, the number of kinds of vegetables canned was about the same for all owner and renter groups and laborers of the Northwest, while laborers of the East Central and Northeast regions canned fewer kinds. Kinds of fruits canned numbered about the same for owners and renters of the East Central and Northeast regions where fewer kinds were used than in the Northwest. Laborers of the Northwest resembled owner and renter groups of that region but other laborer groups canned fewer kinds of fruits. The Mexican group, laborers, did much less canning and used fewer kinds of fruits and vegetables than any other group. Decided difference between white and negro groups was found only among the laborers, the negro of the Northwest canned about ⅓ as many kinds of fruits and vegetables as the white laborers and fewer negro laborer families than white in each region canned fruits and vegetables.

The Family Diet

General Picture

To obtain a view of the diet on an individual basis for each of the 17 groups of families, the supply of those foods known to be dependable sources of certain nutrients was converted into terms of average daily or weekly consumption per person. Calculations were based in part on reported frequency of eating or usual amounts eaten of the specified foods, in part on frequency of buying the customary amounts. The results of this analysis are presented graphically in Figures 2 and 3 wherein comparison with the Texas Food Standard[1] is also shown.

[1]Prepared by the Texas State Nutrition Committee, fall 1940—calls for daily:
1 pint to 1 quart milk
1 egg
1 serving meat, poultry, fish or cheese
1 serving Irish or sweet potatoes
1 serving green or yellow vegetables
1 other serving vegetables
1 serving citrus, tomatoes, raw cabbage, strawberries or melons
1 other serving fruit
1 serving whole grain products, including bread
Other cereals and bread as desired, preferably enriched
Butter, or margarine with vitamins added
Some sweets
More of the above or other foods as needed
6 to 8 glasses of water
Children under 16 need ¾ to 1 quart of milk. Dried beans or peas may be substituted for meat, eggs, the other serving of vegetables or potatoes. **Nuts may be substituted for meat or eggs.**

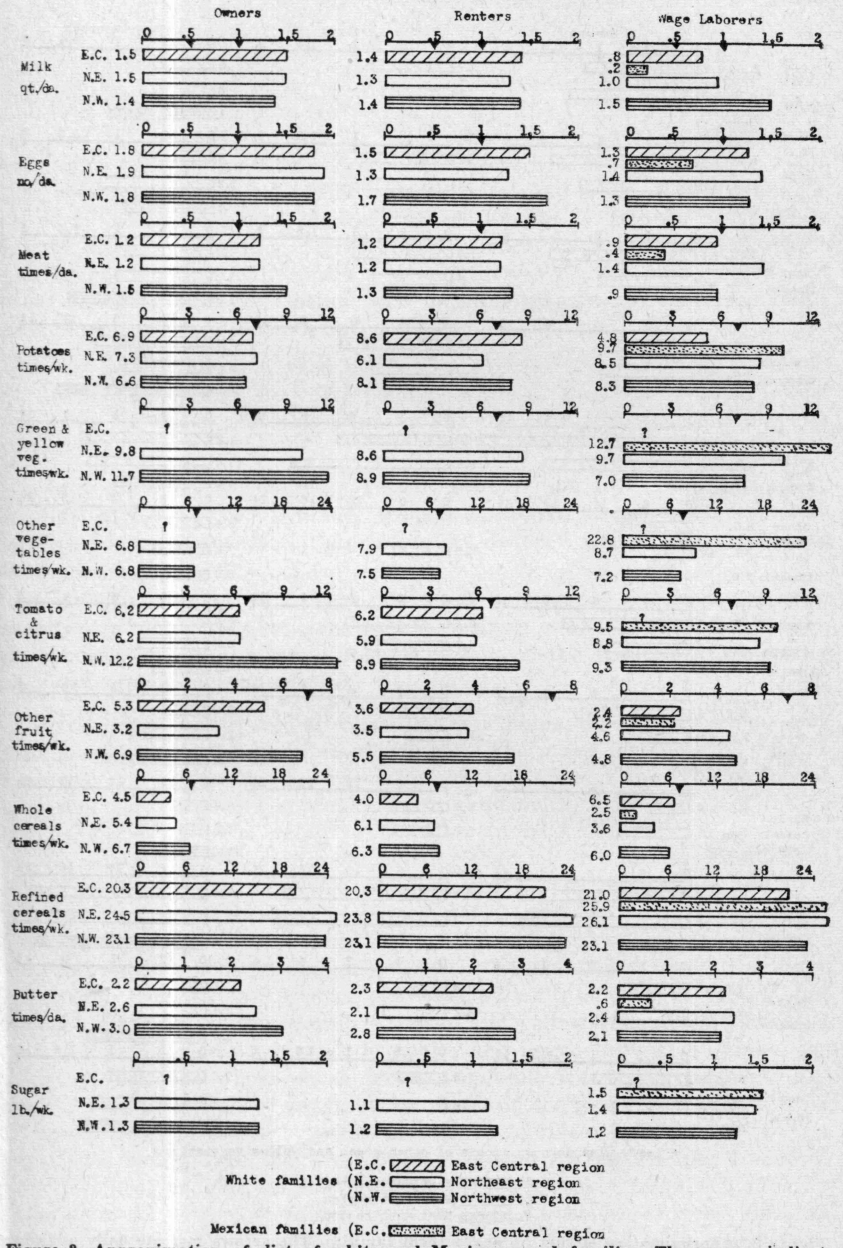

Figure 2. Approximation of diet of white and Mexican rural families. The arrows indicate daily allowance according to the Texas Food Standard. Milk for adults 1 pt., children under 16 years ¾ to 1 qt.

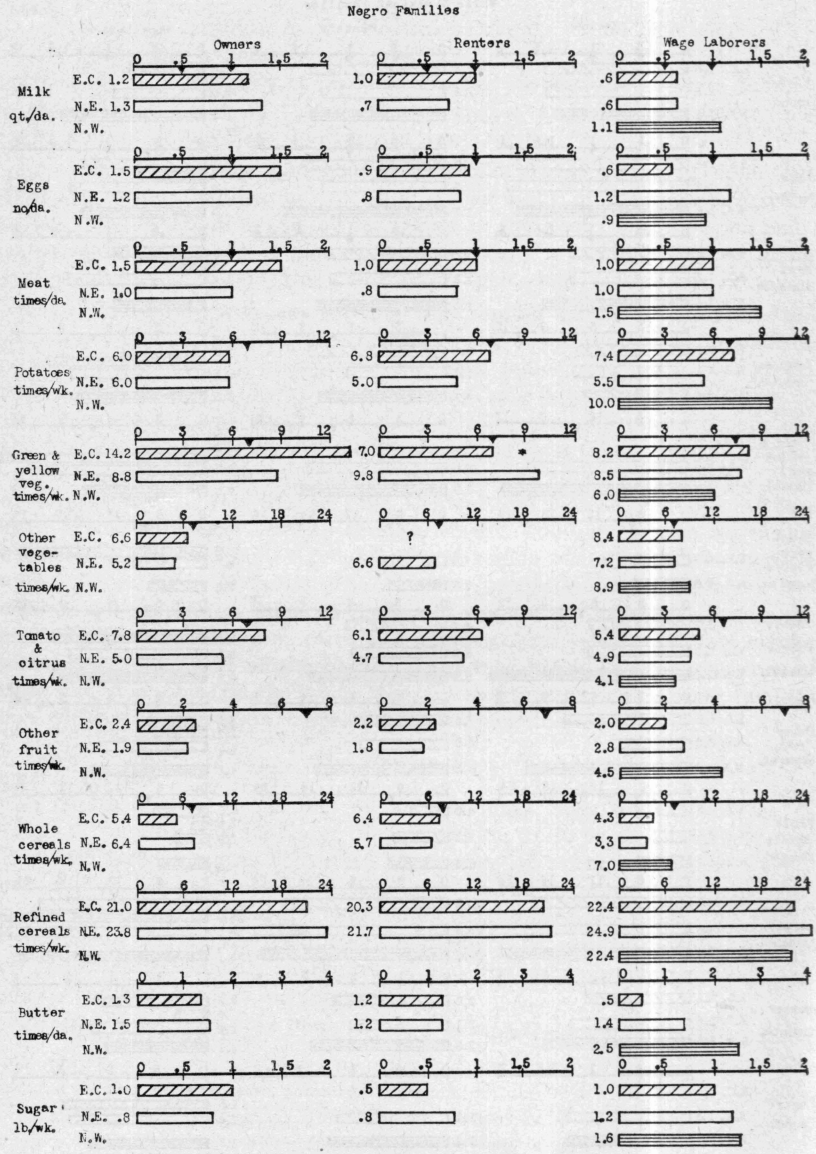

Figure 3. Approximation of diet of negro rural families. The arrows indicate daily allowance according to the Texas Food Standard. Milk for adults 1 pt., children under 16 years ¾ to 1 qt.

Fluid milk was in the food supply of 395 of the entire 400 families. Canned milk, though not popular, was used relatively much more by wage laborers, (40 families out of 100), than by owners and renters (21 families out of 300), with no marked racial differences. The average daily consumption of milk was one quart or more per person in 12 of the 17 groups. Only Mexican laborers fell below 0.6 pint daily. While these averages are a slight overestimation because the time a few families were without milk was not taken into account, it shows that milk was liberally used when it was available. Owners and renters had similar records in the 3 regions with white groups slightly exceeding negro. White laborers in the Northwest region had as good milk supply as owners and renters of the same region, but other laborer groups were below corresponding owners and renters in average amount of milk consumed.

Every family but one used eggs. The average number used by negro groups was lower than for corresponding white groups, but even the lowest averages, for one negro laborer group and the Mexicans, exceeded one egg in two days.

Meats, all kinds considered together, were in the food supply of every family. Only 4 of the 17 family groups averaged having meat less than once per day, the lowest of these being 0.4, while 9 groups had meat more than once daily.

Such liberal use of milk, eggs, and meat safeguards the supply of high quality protein, and gives considerable insurance also regarding calcium, phosphorus, and iron, vitamin A, and factors of the B-complex, especially riboflavin, thiamine, and niacin.

Nearly every family used all classes of vegetables. When home supply was available, vegetables were used abundantly. The many instances of greater frequency during the season was an impressive observation. The eating of Irish and sweet potatoes approximated together once a day for 11 of the 17 groups and 6 times a week for 3 other groups. Contrary to common opinion, Irish potatoes were more popular than sweet potatoes. Families in 12 of the 17 groups used Irish potatoes more often than sweet and in 4 other groups the 2 kinds of potatoes were eaten with equal frequency. Green and yellow vegetables, including leafy, are good vegetable sources of vitamin A value, hence are combined in the graph. Leafy vegetables alone were eaten from 4.1 to 8.9 times per week by white and negro groups, but only 2.2 times by Mexican families. Green and yellow vegetables were used from 1.5 to 5.3 times per week by white and negro groups; 10 times per week by Mexicans whose choice green vegetable was green peppers. Legumes, most used "other" vegetable as shown in the graph, were eaten from 1.7 to 4.5 times per week by white and negro families; by Mexican, twice a day. Pinto beans were the favorite ripe legume for all groups. Tomatoes were the most popular single vegetable, average weekly frequency ranging from 2.1 to 8.1 with most values between 3.3 and 5 times per week. Because of similarity in vitamin C value, tomatoes are combined with citrus fruit in the graph.

All but 9 of the 400 families had citrus fruit on their record and all but 8 families other fruit. A number of families, however, had citrus fruit only at Christmas or in times of illness. The recommendation of fruit twice daily was met by no group, but was most nearly approached by owners of the Northwest region. Four other groups—white owners of the East Central region, white renters and laborers in the Northwest, and white laborers in the Northeast—averaged more than once daily for fruit. If tomatoes are counted with the fruits, the average frequency for 14 of 16 groups equalled or exceeded once daily, and half of the groups averaged more than 10 times per week.

Cereals both whole and refined include all preparations in which cereal is the only or chief ingredient, and each preparation, as breakfast cereal, pie, cookies, bread, was counted as one "time" per day. On the basis of number of families using them, 354, whole cereals appeared nearly as popular as the refined which every family used. But refined cereals were used four times as frequently as whole grain by owners and renters and from 3 to 10 times as frequently by wage laborers. Only 1 group, negro laborers in the Northwest region, reached the minimum recommended frequency of once daily for whole cereals. Enriched flour was used by 53 families, 31 of them in the East Central region, 4 in the Northeast, and 18 in the Northwest. Biscuits and cornbread were by far the most popular forms of bread with all families except the Mexican who prefer tortillas. The combined average frequency for biscuit and cornbread for all groups of the white and the negro families was twice a day or more. Owners and renters showed a preference for cornbread, laborers for biscuit. Amounts used of flour and meal together ranged from 2.6 lb. per week for white owners in the Northwest region to 7.0 lb. per week for Mexican laborers and averaged 4.7 lb. for all groups. The extreme amounts would furnish approximately 600 and 1600 calories per day respectively, the average, 1070, or about ¼ to ⅓ of the daily energy need of adults in the farm family.

Butter was a decidedly popular food. White families in all tenure groups and regions and negro laborers of the Northwest ate butter 2 or 3 times a day; 5 of 7 negro groups averaged more than once daily. For Mexican and negro laborers of the East Central region averages were 0.5 and 0.6 times per day. In several families cream was used instead of butter.

Of sweet foods, sugar tops the list with every family using it. In most families the average was over 1 lb. per person per week; only one was as low as 0.5 lb.

Several food items not shown in the graphs are of interest. Yellow cheese (Cheddar type) was used to the extent of from 0.7 lb. to 8.7 lb. per person per year among 10 groups for which information was available. The highest quantity used contributed but a negligible amount of protein to the daily diet, the equivalent of about two quarts of milk per month, counting 5 oz. of cheese equal in protein to one quart of milk. Margarine was used by approximately ⅛ of the owner families, ⅛ of the renters, and ¼ of the

wage laborers. Commercial salad dressing was more popular than margarine, 5 times as many owners and renters and 2½ times as many wage laborers buying it as bought margarine. Salad dressing is sometimes used for a spread on bread, especially for school lunches.

Cane syrup was used by over ¾ of the families, while approximately ¼ of them chose sorghum. Sorghum was most popular in the Northwest region, especially among owners. Karo and honey, each reported by ½ of the families, was much more popular with owners than renters and wage laborers, and with the white than the negro families in all tenure groups. Candy was eaten by more than ¾ of the families, by an equal number of wage laborers and owners, who outnumbered the renters. Average outlay for candy ranged from 1¢ to 6¢ per person per week for negro and 1¢ to 4¢ for white groups.

Among the nuts, only peanuts and pecans seem of any importance. Amounts reported were exceedingly variable. Some families had nuts only at Christmas; many families used small lots of five to 10 lb., but also a number of families consumed larger quantities varying from 1 bu. to 10 bu.

Coffee and tea were drunk by the same number of families among the owners, but among renter and wage groups, tea was somewhat less popular than coffee. Coffee was a year round drink; tea was commonly used only during the summer. Three-fourths of the families indulged in soda water or Coca Cola and no marked differences between races, tenure groups, or regions appeared.

Comparison with Current Dietary Recommendations

The approximation of the diet is shown in Figures 2 and 3. As an average the food supply of these rural families seemed to provide amply the foods which are dependable sources of the several known nutritive essentials, with the exception that whole grain preparations and fruits appear to be too sparingly used. However, there was the question of how many families might have been short in source of one or another of certain of the nutrients. To answer this question, each family's record was inspected and those which met any one of the following criteria taken out for critical examination. Records were selected which showed: less than 1 pint of milk per person per day; less than 0.3 egg per person per day; meat less frequently than once a day; whole cereal less frequently than once a day; a good source of vitamin C less than once daily; butter less than once a day. The time the family was without the food under consideration was taken into account.

For each family whose record was selected, note was made of the several foods in that family's supply which are good sources of the nutrient being considered. Then the "yard stick" for judging shortage was applied. This yard stick was based on the recommendations contained in the Texas Food Standard. This standard has been demonstrated to be one of the practicable translations (6) into terms of ordinary foods of the Recommended Dietary

Allowances (2) of the Food and Nutrition Board of the National Research Council. It must be kept in mind, however, that without more precise information as to average amounts of the several foods eaten by individuals, the analysis employed provides only a rough approximation of the adequacy of the farm family diet. Food supplies to be judged satisfactory must have furnished daily at least 3 protein-rich foods; at least 3 good sources of vitamin A; at least 1 vitamin C-rich food; at least 3 good sources of the vitamin B-complex if less than an average of 1 pint of milk per person was used or 2 good sources along with 1 pint or more of milk. No separate analysis was made respecting supply of minerals since good food sources of protein and the several vitamins carry minerals as well. Diets lacking dependable sources of protein and vitamins, therefore, are likely to be short in minerals also, especially calcium, phosphorus, and iron.

Respecting single foods, milk and eggs were best supplied as none of 338 families (84%) was short in either of them. The butter supply was judged satisfactory for 337 families (84%). Families having meat once daily or more often numbered 308 or 77% of all. Whole cereal eaten at least once daily by only 165 families or 41% of the total number, constituted the least satisfactory supply of a single food. When all foods in each family's supply which are good sources of each given nutrient were taken into account the following proportions of the total 400 families were found with a plentiful supply of foods rich in certain nutrients—for protein 310 families or 77%; vitamin A, 339 families or 85%; vitamin B-complex, 346 families, 87%; vitamin C, 271 families, 67%. However, during the time the families had garden vegetables, usually from 6 to 9 or 10 months, there was a liberal supply of foods to provide vitamin C for 390 families or 97%. The proportion of families well supplied with protein would be materially increased if cereals had been counted as a protein-rich food. In support of that procedure is the liberal use of milk, proteins of which are known to have high supplementary value for cereal proteins. But cereals have moderate rather than high content of protein which in refined preparations is of lower quality than found in whole grain products. The great bulk of cereals used by these families was refined products. Counting cereals as protein foods in this analysis was considered not justifiable. In that the body can store vitamin A, shortage of this nutrient for a time, provided it follows a period of liberal supply, might prove less detrimental than a shortage of protein, B-complex, or vitamin C since the body does not store up a reserve of them out of surplus in the daily diet. It is important to have in the daily diet foods which are good sources of protein, the B-complex vitamins and of vitamin C, and highly desirable to have good sources of vitamin A daily. Such foods will provide also the necessary minerals which are often lacking in poorly selected diets.

This analysis shows fairly consistent differences between tenure groups in the plentiful supply of foods as sources of certain nutrients. The findings are presented graphically in Figure 4.

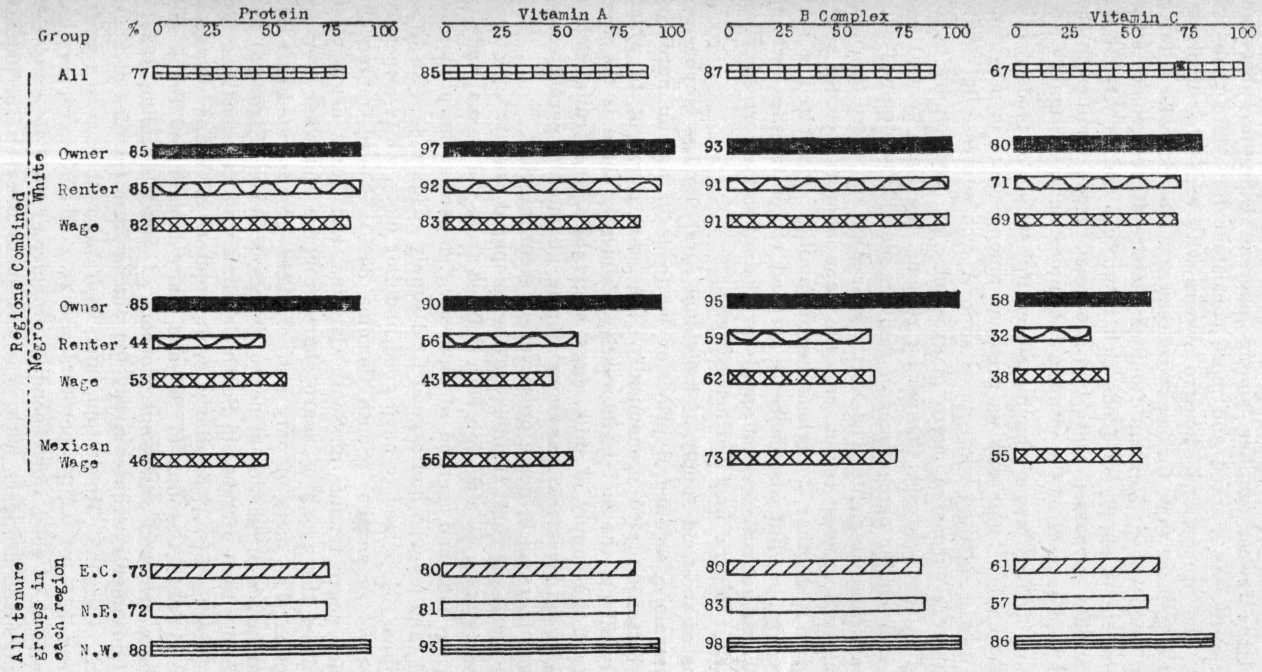

Figure 4. Proportion of families in specified groups having a plentiful supply of foods to furnish certain essential nutrients as shown.

In general, the most families with an excellent food supply were found among owners, the fewest families, among laborers. Differences between tenure groups were less marked and more consistent for white than for negro families. The proportions of negro owners with excellent supply of foods were much greater than for negro renters and laborers who differed but little from each other. Mexican families (laborers) resembled negro renters and laborers in supply of foods rich in protein and in vitamin A, but Mexican families surpassed those two groups of negro families in the supply of good food sources of the vitamin B-complex and of vitamin C.

The proportion of negro owners having a plentiful supply of foods rich in protein, also B-complex foods was as great as among white owners; and negro owners nearly equalled white in vitamin A rich sources. But white renters and laborers surpassed negro in excellence of food supply in all points included in this analysis. Comparing regions, the East Central and the Northeast had similar percentages of families plentifully supplied with foods rich in particular nutrients. The Northwest region surpassed the other two regions. In the Northwest region, only the wage laborers included negro families, while in the other 2 regions negro families constituted a part of all 3 tenure groups. But also more owner and renter families (white) of Northwest Texas had an excellent supply of foods than the corresponding groups in the East Central and Northeast regions.

This analysis of the food supply of individual rural families emphasizes the greater prevalence of liberal provision by foods of certain nutrients among those better situated economically. The marked extent to which seasonal supply affects the diet is impressive. Evidently there is the need to make constant the supply of milk, eggs, vegetables, and fruits. Better management of good livestock, gardening during all months permitted by the weather, and increase in home preservation seem in order.

The findings for Texas rural families may be compared roughly with those of two other surveys (3, 4) although both differed from the Texas study in mode of securing data and method of analysis. Comparing the proportion of Texas rural families who had a good food supply (Figure 4) with those of South Carolina (3) judged to have good and fair diets, white owners in the 2 states were comparable (South Carolina 85%). Negro renters of Texas resembled negro tenants of South Carolina, and Texas negro wage laborers resembled the group of negro share croppers and wage workers in South Carolina. The diets of only half of these groups rated fair and good. But a far larger proportion of negro owners in Texas (Figure 3) had a good food supply than of those in South Carolina who had good and fair diets (South Carolina 51%). Similarly, white renters of Texas surpassed white tenants of South Carolina (77%) and white laborers of Texas surpassed the share croppers and wage workers of South Carolina (52%). According to Consumer Purchases Study (4) among farm families of South Carolina, North Carolina, Mississippi, and Georgia, with incomes under $500.00 per year, 31% of white operators and 25% of share croppers had diets rated excellent or good. Corresponding proportions were 45% and 41% for white owners and croppers with yearly incomes between $500.00 and

$999.00. Among negro owners and share croppers (classed together) in the 4 southeastern states only 12% of those in the lower income group had excellent or good diets, and 26% of those in the higher income group. Among Texas rural families nearly twice as many (Figure 4) had an excellent food supply as among the southeastern rural families in corresponding tenure groups had excellent and good diets, according to the federal survey.

Influence of Children in Family Upon Foods Used

It was frequently observed in the course of interviews that families with children took care to provide for them certain foods, especially milk and citrus fruit. No written record was made of these observations nor were any definite questions asked concerning children's diets. The records as taken, however, permit examination from the viewpoint of the influence which the presence of children in the family appears to have on the character of the food supply. The summarized data for the analysis which was made are shown in Table 12.

TABLE 12

Difference Between Families with Children and without Children in Kinds of Foods Used

Food Class	Percentage by which proportion of families in one group exceeds proportion in other group in the use of food items on which they differ											
	White						Negro					
	Owners		Renters		Wage Laborers		Owners		Renters		Wage Laborers	
	With children	Without children	With children	Without children	With children	Without children	With children	Without children	With children	Without children	With children	Without children
Milk	—[1]	—	11		34		49		55		11	
Cheese	50		5[2]	95[2]		8	480		200		17	
Meats	21	43	25	25	32	22	96		83		8	21
Cereal												
Whole	46	10	63	16	68	21	30		176			82
Refined	26		53	26	43	19	102	46	137		18	86
Fruits												
Citrus	10	41	7		18		—	—	59			44
Other	23	20	21	22	23	18	52	40	90	61	45	45
Vegetables												
Legumes	13	20	18	14	42	24	—	—	81			54
Starchy	10		3		16	23	73		23			63
Leafy	26		20		12	22	73	614	61		23	100
Green and yellow	30	25	20	18	27	16	70		94		29	62
Other	22		14	11	64	25	41	27	42		15	100
Tomatoes	—	—	—	—	—	—	—	—	17		—	—
Fats	—	—	14	8		194	—	—	49			210
Nuts	52		60		21	275	100		142			74
Sweets	23		22			3	48	257	32			100

[1]The dash means used by the same proportion of families with children and of those without children.

[2]Values shown for both groups of families mean that more families with children used certain food items in the class than did the families without children while other items in the same class were used by more families without children than by those with children.

In each tenure group, regions combined but races kept separate, the families were divided into two sub-groups (a) those in which there were children under 16 years of age, and (b) those in which all family members

were 16 years or older. A count was made of the families in each sub-group who used each food item. The items used by a greater proportion of one sub-group than the other were noted. The proportion of total families in each sub-group using these items (considered together) of each class of foods was then derived. Lastly, the difference was determined in percentage, by which the larger proportion of families exceeded the smaller proportion in using the class of foods under consideration. The number of food items out of a total of 178 in the use of which families with children differed from families without children was 76, 109, and 80 respectively for white owners, renters, and laborers; corresponding figures for negroes were 39, 82, and 49.

This analysis revealed that in all sub-groups except the negro wage laborers the families with children exceeded the families without children in using several of the classes of foods. Among negro wage laborers as many differences were in favor of the families without children as of those with children.

Cereals were outstanding among the food classes more extensively used by white families with children, differences for whole grain products being greater than for refined. Other fruits than citrus, leafy vegetables, green and yellow vegetables, nuts, and sweets deserve mention also as being considerably more used by the white families with children. Negro owners and renters with children made more extensive use of cereals than did families without children, but the difference was greater for whole cereals compared with refined only among the renters. Cheese, meats, "other" fruits, legumes, green and yellow vegetables, and nuts were also outstanding in their greater use by negro families with children.

The main importance attached to the tendency of families with children to use a greater number of the items in several of the food classes is that the more varied diet resulting affords the children and grown-ups too an opportunity to learn to like many kinds of foods, a situation to be commended. The greater variety was apparently not associated with greater adequacy of diet. In a second analysis it was found that among the families judged to have shortages of certain nutrients in their food supply, the ratio of number of families with children to number without children was identical with the ratio in the total number of white families in the survey and practically the same for negro families.

Eating Habits Compared with Those of Texas School Children in 1927-'29

Eating habits as indicated by the general picture of the individual diet among these rural families may be compared with those revealed by the study of the diet of Texas school children (5) in Brazos, Jefferson, and Hidalgo Counties. The pupils, 36% of whom were from farm families, kept written record of all food they ate for a week in two seasons of the year at some time between the fall of 1927 and spring of 1929 inclusive. The

present study shows an increase in the average consumption of milk, butter, eggs, vegetables (especially leafy) and whole cereals, while the use of meat and fruits was about the same.

The daily average for milk consumption reported by the children ranged from a little over ½ pint to 1⅓ pints per person in the different groups, whereas a quart or more per day was the rule among the farm families of this study and only 1 group, Mexican laborers, fell below 0.6 quart. Butter, often conspicuous by its absence in the children's records, was eaten by them on the average 4 to 8 times in 10 days, while the farm family food supply provided butter at least once in 2 days and 2 out of the 17 groups, but in 15 groups from 2 to 3 times a day. Eggs, eaten by the children on an average of 2.5 to 5 times per week, were in the farm diet from 4 to 13 times per week and in 12 of 17 farm family groups the average number of eggs used daily ranged from 1.2 to 1.9. Leafy vegetables were eaten by the children about 2.5 times per week, but by farm families from 4.1 to 8.9 times per week with exception of one group which averaged 2.2 times. Tomatoes and potatoes as reported by the farm families may have had a share in making their larger total vegetable consumption as compared with that of the school children. The consumption of legumes appears to be unchanged as found by the 2 studies. Whole cereals eaten by the children from once to 3 times per week were used by most farm family groups from 4 to 6 times per week.

The improvement noted in the present use of foods by farm families over that of 15 years ago by school children may be due in part to errors inherent in the method of securing data in both studies. But in consideration of the marked increases in estimated average amounts per person eaten by the farm families, intensive educational efforts in the meantime to improve their diet, and the advantages farmers have had from economic changes, it seems likely that there has been considerable real improvement in the eating habits of farm families. It seems highly desirable to make an assessment of the nutritional status of members of representative rural families in Texas along with a more precise dietary study than this survey.

Summary and Conclusions

Through personal visit to the homes of 400 rural families distributed in 5 counties and representing 3 regions of the state (Brazos Co., East Central; Nacogdoches and Rusk Co., Northeast; and Lubbock and Lamb Co., Northwest) information was secured regarding their food supply over the past year. Three tenure groups and 3 races were included, (a) owners or operators, white and negro; (b) renters, white and negro; and (c) wage laborers, white, negro, and Mexican.

Among 201 food items about which inquiry was made, 123 of them were used by from 75% to 100% of the families in one or more of the groups, 82 in the East Central region, 94 in the Northeast and 115 in the Northwest.

Only sugar, white flour, cooking fat, meat of one or another kind, baking powder, and soda were used by every family. All but 1 family used eggs, all but 2, Irish potatoes, and all but 5, milk. Some but not all kinds of fruits and vegetables listed were in the food supply of every family. Approximately ¼ of the food items were reported "not used" by every family in one or more of the groups. In proportion to the total number of items in the food class, most of the foods not used belonged to the classes of cheese, whole cereals, fruits, leafy vegetables, and nuts.

Home production supplied the great bulk of the foods used, particularly of milk, butter, eggs, poultry, most vegetables, peanuts, and preserves. Purchase was the chief means of obtaining cheese, beef, whole cereals, citrus fruits, margarine, salad dressing, sugar, syrups, and the accessories. Important foods obtained in more nearly equal part by home production and purchase included pork, ripe legumes, fruits other than citrus, flour, and cornmeal. A few little used foods—mutton, chevon, rabbit, honey, pecans and other nuts than peanuts—usually came from other sources, chiefly gift and wild supply.

Few regional differences were observed regarding sources of foods. Purchase of vegetables and fruits was more common in the Northwest than in the other two regions. This difference may be due in part to the longer growing season and greater rainfall in the East Central and Northeast regions, in part to greater resources for money income among families in the Northwest region. Peanuts were home grown in the East Central region, purchased in the other two. Purchase was a more common source of fish, pecans and other nuts in the Northwest, of mutton and chevon in the Northeast, of candy in the East Central and Northeast regions, than elsewhere. As between gifts and wild supply, the latter furnished more foods in the East Central and Northeast regions while in the Northwest gifts greatly exceeded wild supply.

Sources of food for owners and renters were similar, but wage laborers purchased proportionately more of their food supply than did the other two tenure groups. White families more than negro and Mexican practiced home production of food.

Approximately the same area of land was used by corresponding tenure groups in the 3 regions to grow food for family consumption. Most owners and renters, both white and colored, used 2 to 3 acres for food production. Among wage laborers 18% had no land for food production, 40% used ½ acre or less, and plots above 1 acre were uncommon. Among owners and renters, but not wage laborers, more families using in excess of ½ acre for food production had fruits and vegetables to eat than did families using less food acreage. Influence of food acreage upon supply of fruits and vegetables was more marked among negro than white families. Gardens in both spring and fall were much more common than gardens in spring only, especially among owners but to a less extent among renters, with both white and negro families in the 3 regions.

In live stock as a source of food supply some rather marked differences were observed between races, regions, and tenure groups. White families exceeded negro in the number of cows, beef cattle, chickens, and hogs owned. Differences between race groups were greater respecting supply of milk, eggs, and beef than of poultry and pork; however, hogs butchered by white families usually were heavier in weight than for corresponding negro groups, and white families ate the greater number of fryers and hens. The Mexican laborer group resembled the negro. Owners differed but little from renters of the same region in live stock ownership, but both these groups surpassed corresponding laborer groups. Owners and renters of the Northwest exceeded corresponding groups of the other 2 regions in live stock owned, home beef supply, and constancy of milk and egg supply. But among wage laborers, those in the Northeast usually led, followed closely by those of the Northwest. Northeast laborers probably had higher money income from lumber mill and oil field employment than had farm laborers, and farm laborers in the Northwest presumably profited by the good economic status of their employers.

In preservation of food, hilling, drying, and freezing were used meagerly. Canning of fruits and vegetables was done by 92% of the families and 81% made preserves, marmalades, jams, and jellies.

An approximation of the farm family diet was based on reported frequency of eating prominent foods and on customary amounts home produced or purchased. This analysis indicated that on the average there was an ample supply of the foods which are dependable sources of the several known nutritive essentials, except that whole grain cereals and fruits seemed too sparingly used. Comparison of individual family records with the Texas Food Standard indicated a satisfactory supply of protein-rich foods for 77% of the families, of vitamin A sources for 85%, of vitamin B-complex for 87%, and of ascorbic acid (vitamin C) for 67% out of garden season, but 97% during garden season. Owners surpassed renters, who in turn surpassed laborers, in excellence of food supply. White groups were better supplied than negro. More families in the Northwest had an excellent food supply than in the other 2 regions. Families with children under 16 years had a more varied diet than those without children, but there was no difference in the satisfactory quality of the food supply of these two groups of families. Where needed, improvement in the farm diet could be effected by making constant the supply of milk, eggs, vegetables, and fruits. Better management of good live stock, extension of the practice of growing fall as well as spring gardens, and increase in home preservation of food seem in order.

Eating habits compared with those revealed by the study of the diet of Texas school children in 1927 to 1929 show great improvement. Rural families averaged approximately double the use of milk, butter, eggs, leafy vegetables, and whole cereal preparations as compared with that of the school children. The rural families for the most part met or exceeded cur-

rent dietary recommendations of 1 qt. of milk per person per day, butter 2 or 3 times daily, and exceeded 1 egg a day per person. Consumption of whole cereals and fruits should still be increased.

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